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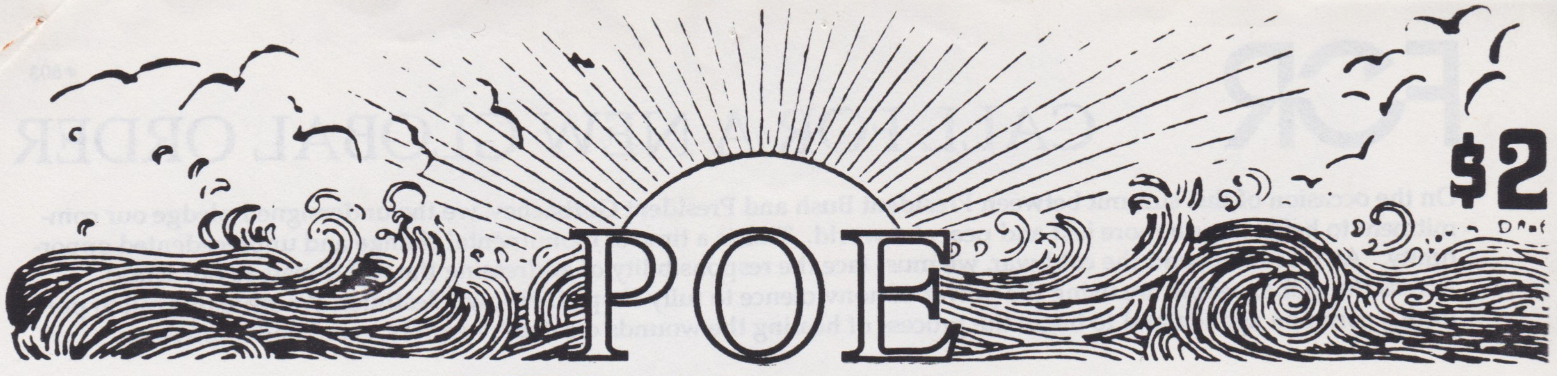

PACIFIC OCEAN ECOLOGIST

December, 1991

Japan Nuclear Disarmament Conference

by Jim Jacobson, Member, American Peace Test National Council

American Peace Test (APT) sent me as its representative to Hiroshima and Nagasaki for the "World Conference Against A & H Bombs," August 2 to 9, sponsored by the Japanese peace group, Japan Congress Against A & H Bombs ("*Gensuikin*").

On August 4 foreign delegates visited the A-Bomb Museum at Hiroshima Peace Park, which dramatically recounts--through descriptions and poetry of civilian victims--the horrible incineration of Hiroshima. A scale-model exhibit reveals the mass of rubble created by the blast. Videos of still photos and movies from the tragic aftermath show continuously. There are displays of the remains of residents' clothing and personal effects; and pieces of twisted steel and concrete turned white by the heat of the explosion. A full size (9 foot) model of the "Little Boy" uranium bomb is ominously suspended against one wall. The museum creates graphic visions of how people were vaporized, burned, blinded, and irradiated in the holocaust. It seems to this writer vitally important that we should be reminded time after time of the crime against humanity that was committed by the use nuclear weapons against Hiroshima and Nagasaki. We should listen to the nuclear victims--known as "Hibakusha"--and heed their ghastly accounts of August 6 and 9, 1945. We must remember and educate others that many of the "survivors" are still dying today from radiation induced diseases. After touring the museum one sees clearly why the use of nuclear weapons against Japan--or against anyone ever again--cannot be justified under any circumstances.

August 5 conference meetings dealt with reports on the Persian Gulf war and the appalling number of human deaths that have gone largely unreported in the news media (estimates range from 150,000 to 300,000); the incredible destruction of the Iraqi infrastructure; and the disastrous environmental consequences. Dr. Naham Warhaft of Australia (a representative of IPPNW-International Physicians for the Prevention of Nuclear War) said more than 88,000 tons of bombs were used on Iraq--the equivalent explosive power of about seven Hiroshima-size bombs! He reported that a group of Harvard University physicians who visited Iraq following the war have predicted that 170,000 children will die in the next year as a result of lack of medical treatment and nutrition, and the uncontrolled spread of disease.

Other presentations centered on the growing numbers of radiation victims (now estimated at 20 million worldwide) from continued nuclear weapons testing, nuclear power plant operations, and accidents such as Chernobyl. The Japan peace movement is organizing support for a Hibakusha Relief law to address the ongoing suffering of Hiroshima/Nagasaki nuclear victims, which faces a difficult time in the Japan parliament.

On Hiroshima Day we bused to Peace Park for the memorial ceremony where wreaths were placed honoring the victims and their families, hundreds of doves released, pure water symbolically presented to console the souls of thousands who perished seeking water, the peace bell rung, and the crowd of over 60,000 rose to observe one minute of silence and prayer at 8:15 AM--the moment the bomb struck Hiroshima. A list of 4,787 names of additional radiation victims who have died in the past year was placed with the other names of victims in the Peace Park monument (called a "Cenotaph"), bringing the total Hiroshima death list to 172,024.

August 8 conference sessions in Nagasaki involved the effects of nuclear weapons testing on the people of the Marshall Islands, Moruroa, the USSR test sites, and my presentation on the Nevada nuclear test site. Delegates from Estonia and Lithuania related their direct experiences on radiation exposure from Chernobyl. Korean delegates told of the destabilizing deployment of about 1,000 U.S. nuclear weapons in South Korea, and of their efforts toward re-unification of North and South Korea. An activist from Honolulu described the problems with nuclear reactors aboard Naval vessels in Pearl Harbor. Nuclear testing radiation victim Nelson Anjain and James Matayoshi of the Marshall Islands, reported that the U.S. government has a contingency plan to resume atmospheric nuclear weapons tests in the Pacific anytime it feels the need (from documents released under a Freedom of Information Act request), which would be a heinous violation of the 1963 Partial Test Ban Treaty.

At the closing conference rally August 9 we heard from Nagasaki Hibakusha, Gensuikin leaders, labor and political party officials, a message from the mayor, and the minute of silence at 11:02 AM to remember those who died and continue to die from the Nagasaki bomb. A total of 94,000 people perished at Nagasaki, and in the years following the holocaust another 30,000 people who died from radiation effects have been added to the list.

FOR

#603

CALL FOR A NEW GLOBAL ORDER

On the occasion of this summit between President Bush and President Gorbachev, we the undersigned pledge our commitment to help shape a more just and peaceful world. This is a time of monumental change and unprecedented opportunity. As we see beyond the cold war, we must face the responsibility of addressing the real threats to our world. Across the globe, people are using the power of nonviolence to fully shape their own destinies. We issue this call to put forth a common agenda and to begin the process of healing the wounds created by enmity, greed and oppression.

THE CREATION OF A NEW INTERNATIONAL ORDER

As citizens in one of the most powerful nations ever, we have a special responsibility to act in accordance with our Constitution, with international law, and with our professed ideals, which proclaim freedom and justice for all people.

We call for an end to the international arms trade, and the abolition of nuclear weapons by the year 2000. These holdovers from the cold war threaten every inhabitant of the earth. They destroy resources, squander energy, and crush the hopes of the poor. They are symbols of moral and economic bankruptcy.

We call for the release of the Developing World from the crushing burden of debts that can never be paid. We must work with the governments and the people of those countries to find creative ways to remove this unreasonable demand.

We call for the recognition, in deed and word, of the inherent right of all people to self-determination. We call for adherence to a strict policy of no military intervention in the affairs of other nations. Neither the security nor the wealth of a democratic nation can be built on fighting "low intensity" wars in poor countries. Repressive regimes cannot lift the world's majority who are poor out of their poverty, and these governments must not be supported. The continued oppression of indigenous peoples and the domination of sovereign nations must end.

We call for all nations to work through multilateral institutions like the United Nations, to reverse the trends that now threaten economic and environmental catastrophe.

REMOVING THE WALLS

We call for the removal of the walls that still exist in our world and in our hearts. As the Berlin Wall has fallen, let us examine the other walls that still stand firm, creating false separations between peoples.

We call for the removal of the walls that stand at the center of the vicious cycles of sexism, racism and homophobia. We must remove the walls in our hearts that prevent reconciliation, the walls in our minds that prevent understanding, and the walls in our actions that reinforce division.

We call for the removal of the wall that has protected the Pentagon's budget from the scrutiny of the people for forty years. We question the expenditure of $295 billion a year in the post-cold war world. We call for the military budget to be cut at least in half, and the freed resources used to fund human needs and to convert to a civilian economy.

We call for the removal of walls that form the gap between the haves and the have nots of every nation. In a world of limited resources, if the rich base their prosperity on ever increasing consumption, the gulf separating rich and poor will continue to widen.

We call for the removal of all walls that prevent individuals from claiming their full human rights. We must look upon our diversity as our strength, and learn to see our differences as opportunities for enrichment.

HEALING OF THE EARTH

We call for decisive legislative leadership in global measures aimed at preserving our environment. We can no longer hold on to the fragile illusion that our actions are wholly independent. We must act as if every action is being judged by our children's children.

We call for full recognition, in word and in deed, of the integrity of creation. We must commit our time and money to exploring the use of renewable resources. We must no longer destroy what we cannot create, and we must cease using what we cannot replace.

SPIRITUAL COMMITMENT

We speak out of the depths of our diverse faiths and out of concern for the earth's future. We fervently seek justice and peace at this moment, as one era ends and a new one begins. We pledge to join others willing to act within the sacred web of life that unites all that is. We accept the challenge to join in this momentous struggle, not just at this political moment, but for a lifetime.

This is a time of monumental political change that calls for monumental acts. We are presented with a unique opportunity to transform ourselves and our society, to tackle the global problems that plague humanity, and to remove the walls that for too long have divided the human family.

We call upon others to join with us in the healing of the many wounds of this planet and its people.

Sacramento Solution: Energy Efficiency

By ED SMELOFF

(VPT) In 1989, Sacramento, California ratepayers took control of their energy future. Spurred to act by skyrocketing electric bills, Sacramentans voted to close the Rancho Seco nuclear plant, a clone of the Three Mile Island reactor. The "Ranch" had operated at a dismal 39 percent average capacity over its 14-year lifetime; ratepayers demanded cheaper, more reliable power.

In two short years since, the publicly-owned Sacramento Municipal Utility District (SMUD) has rebounded from its nuclear nightmare, stabilizing double digit rate increases, recovering Wall Street confidence for its previously plummeting bond ratings, and transforming a depressed work force into proud employees. Its plan to meet future electricity demand with efficiency improvements will actually *save* SMUD's ratepayers more than $1 billion by the year 2010.

After years of struggling with a troubled nuclear plant, SMUD is becoming a national leader in cost-competitive energy efficiency, and looking toward renewable energy technologies.

Efficiency is seeping into other utilities' boardrooms and supply plans. In New England, 12 utilities will invest more than $300 million annually to retrofit mills, offices and homes. These utilities have committed $1.65 billion through 1996 toward programs to install high-efficiency lighting, reflective windows, upgraded motors and other equipment. They foresee saving money over the long run through efficiency measures that ensure adequate electricity supplies *without* new plant construction.

In California, two private utilities, Pacific Gas & Electric Co. and Southern California Gas Co., have both established aggressive energy efficiency improvements for the homes and offices they serve.

Through direct installation, consumer rebates, education and loan programs, these utilities and many others are making a safe bet... because efficiency pays.

Sacramento's efficiency and conservation program is perhaps the most ambitious. It includes controlling the maximum demand for power, reaching out to architects, engineers and builders to encourage energy efficient designs for new buildings, and implementing conservation programs to save electricity in existing homes and businesses.

New construction offers a vast conservation opportunity in Sacramento, especially in lighting and air conditioning. With proper design, new buildings can be made 25 percent more energy efficient than required by building standards without adding to construction costs. Electricity to serve these new homes and offices will come from savings captured from existing customers.

SMUD provides free compact fluorescent lights, low-flow shower heads, caulking compound, weatherstripping and switch plate gaskets to its customers. Customers can also receive rebates on refrigerators, air conditioners, solar water heaters and other selected measures. And the utility provides low-cost financing and helps arrange for qualified contractors for major equipment installation.

Why all the bother? Because energy efficiency is far cheaper than building new power plants.

Sacramento's energy savings plan extends into the future. With the help of citizen volunteers, SMUD has committed to plant half a million shade trees in its service area by the year 2000, which will reduce customers' air conditioning needs by up to 40 percent.

To meet future electricity growth, the utility is actively developing several renewable energy projects. Together with other utilities, SMUD is building an advanced solar thermal power plant. This new solar technology holds the promise of sun-powered electricity with no fossil fuel back-up. Also, Sacramento's utility is supporting the commercialization of a variable-speed wind turbine, which will significantly lower the cost of wind power; it will likely install several hundred of these wind turbines in the next five years.

Citizen pressure converted SMUD from a troubled nuclear utility to a model of reliance on energy efficiency and leadership in renewable resources. Its ratepayers make conservation programs work, enthusiastically installing efficient lights and appliances...and reaping the financial benefits. Utilities across the country can save both energy and money by making energy efficiency programs their top priority.

Ed Smeloff is a director, and the elected President of the Board of the Sacramento Municipal Utility District.

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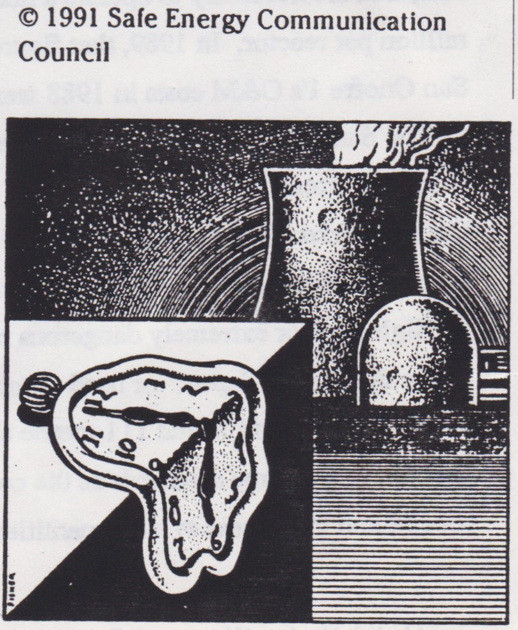

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Affiliated with National MOBILIZATION for SURVIVAL

April 25, 1991

Contact: Ken Bossong or David Tricket: 202-546-4996

San Onofre Nuclear Facility Highlights From Public Citizen Report on Nuclear Lemons

The San Onofre nuclear power plant, with three nuclear reactors, did not rank among the nation's 20 worst reactors, but did have its own problems between 1987 to 1990, according to the Public Citizen "Nuclear Lemons" report. The San Onofre facility, just south of the city of San Clemente (55 miles north of San Diego), is operated by Southern California Edison, which is 75 percent owner of the plant. San Diego Gas & Electric Company owns 20 percent of San Onofre. There are currently 111 licensed commercial nuclear reactors in the U.S. The Public Citizen report is based on scores of government and industry reports.

Public Citizen's study found that San Onofre Units 2 & 3 ranked 4th in the amount of radiation released to the environment during 1987 and 1988. San Onofre 2 & 3 released a total of 11,310 curies of radioactivity in 1987 and 2,881 curies in 1988, for a total of 14,191 curies for both years. The industry-wide average for radiation releases in 1987 was 2,233 curies per reactor, and in 1988, 1,575 curies per reactor. All nuclear power plants inevitably release radioactive gas and water into the environment--even during routine operations. There is substantial evidence that even so-called "low-level" radiation is harmful to those persons exposed.

The vintage 1968 Unit 1 reactor at San Onofre, with a long history of safety problems and astronomical repair costs, ranked 8th in "capacity factor" of the 10 worst reactors in the nation during 1988-90. Capacity factor is the ratio of how much electricity a reactor actually produces during a given period of time compared to how much electricity it was designed to produce if it had been operating at full power during the entire period. San Onofre 1's 1989 capacity factor was only 30.54 percent, and in 1990 its capacity factor was 40.44 percent. In 1989 the industry-wide average capacity factor for all 111 licensed commercial reactors was 62.57 percent; in 1990 the average was 66.07 percent.

San Onofre 1 also ranked 4th worst among the nation's 10 worst reactors in terms of highest operating and maintenance costs in 1988 and 1989. Operating and maintenance costs (O&M) refer to the routine, day-to-day expenses (other than fuel) that are necessary to operate a nuclear reactor. In 1988, O&M costs totaled $7.6 billion nationally, or about $69.5 million per reactor. In 1989, that figure had risen to about $8.2 billion industry-wide, or about $75.5 million per reactor. San Onofre 1's O&M costs in 1988 were $76.662 million, and in 1989, $82.448 million.

The San Onofre facility ranked 77th in the nation in terms of radiation exposure to its on-site workers. The three San Onofre reactors exposed plant workers to the equivalent of a total of 11,233 chest X-rays during 1988 and 1989. San Onofre workers had an average collective exposure of 224.7 "rems" of radiation during that period. A rem is a unit of ionizing radiation that produces the same biological effect as a unit of absorbed dose of X-rays.

High-level or extremely dangerous radioactive waste stored (in pools of water for constant cooling) at the San Onofre site in the form of "spent" or used uranium fuel for 1989 was 171 "metric tonnes uranium" (MTU) for San Onofre 1; 156 metric tons for Unit 2; and 111 metric tons for Unit 3. Environmentalists believe the storage pools for spent fuel rods are not built to the same standards as the containment dome at San Onofre, and a major earthquake could result in the loss of coolant and the release of vast quantities of radioactivity, as in the case of a reactor core meltdown.

GREENPEACE ACTION

Disarmament

The nuclear nations of the world possess a combined arsenal of atomic weapons with an explosive force equal to four tons of TNT for every man, woman and child alive today. The mere possibility that nuclear weapons will be used, whether through error or arrogance, makes nuclear disarmament the most important challenge of our time.

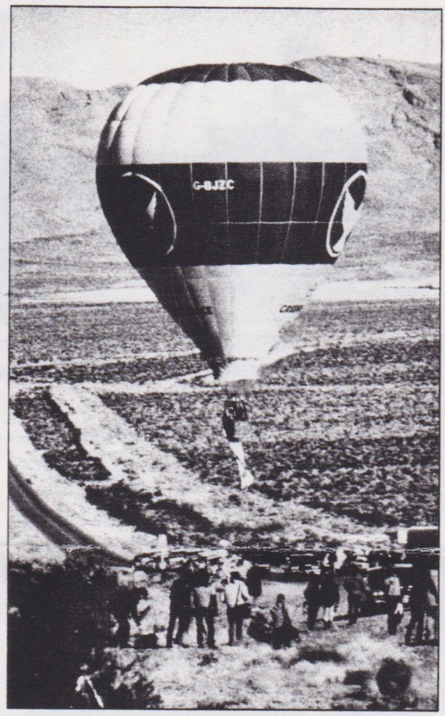
A one megaton nuclear blast—small by modern standards—occurring over a medium-sized city would obliterate the city center. The heat and force of the blast would destroy almost all life within that area, with deaths and casualties extending for tens of miles. In a ground level explosion, radioactive fallout would poison the surrounding area for hundreds of miles.

Besides killing millions of people, the thousands of megatons of firepower that could be unleashed in a nuclear war would ravage the earth's biosphere. Many scientists believe that an attack with numerous large-scale nuclear detonations would cause long-lasting environmental damage on a global scale. The aggressor country would suffer severe health and economic effects even without a nuclear response from the country attacked.

Greenpeace was formed in 1971 by activists concerned about the nuclear arms race. In that year, a group of people from British Columbia sailed to Amchitka Island in Alaska to protest U.S. nuclear weapons testing. Since that time, Greenpeace's nuclear disarmament work has grown to encompass a range of issues, from ending weapons testing, to stopping the production of nuclear weapons material, to ridding the oceans of naval nuclear weapons.

Campaign to End Nuclear Weapons Testing

Since the invention of the atomic bomb, over 1,750 nuclear explosive devices have been detonated to test and develop ever more sophisticated weaponry. These tests can cost as much as $60 million each, depending on their nature and purpose. In addition to weapons development, testing helps scientists and engineers study the effects of nuclear detonations on radar and communications, providing strategists with weapons specifically designed for nuclear warfighting.



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Greenpeace hot-air balloon Trinity arrives at the U.S. nuclear test site in Nevada.

Since 1971, Greenpeace has pressed for a Comprehensive Test Ban Treaty (CTB) to end all nuclear tests. A ban on nuclear weapons tests would stop the development of more sophisticated nuclear warheads. Preventing the creation of new generations of warheads would remove a major stimulus to the proliferation and modernization of nuclear weapons. A CTB could provide nonnuclear states with important support and leadership in stopping the global proliferation of nuclear arms.

There is widespread agreement among scientists and policymakers that a test ban treaty would be verifiable. Developments in seismic technology have made it possible to detect even extremely small nuclear detonations. In addition to seismic verification techniques, satellite surveillance and intelligence gathering make it extremely difficult for any nation to secretly test nuclear bombs. The CTB is no longer a technical issue; it is a matter of political will and effective leadership for the nuclear superpowers.

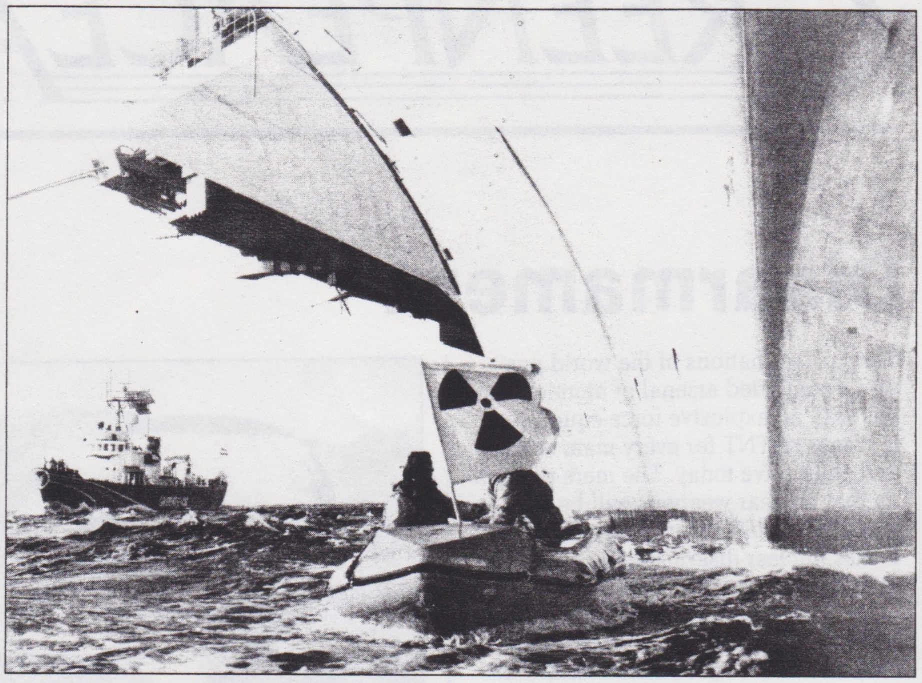
Ending Production of Nuclear Weapons Material

The Department of Energy (DOE) produces the key ingredients used in all nuclear weapons. These so-called "fissile materials"—plutonium or highly enriched uranium—are the elements that sustain the reaction upon which all nuclear explosives depend. The production of these materials has involved as many as 19 facilities around the country. Operated by government contractors, these facilities are exempt from the safety controls and close monitoring that are applied to commercial nuclear facilities. In the name of "national security," the DOE has consistently defied laws designed to protect the public from the routine and accidental release of radioactive and hazardous materials and the dangers associated with the generation of hazardous nuclear wastes.

The DOE nuclear material production complex is now dangerously old and dilapidated: all of the production reactors in use are over 30 years old. DOE's indifference to environmental concerns has led to dangerous and irresponsible radioactive waste management practices and widespread toxic contamination which has seriously jeopardized public health and safety. Recent disclosures have revealed a thirty-year pattern of lies and coverups about severe accidents and deliberate releases of radioactive materials at the DOE's weapons production facilities.

DOE continues to advocate adding new production reactors which would cost tens of billions of dollars. They have lobbied for this in spite of an admission in the DOE 1989 budget request that "most of the nuclear materials needed for new weapons systems are obtained from retired weapons." DOE Secretary John Herrington reinforced this contradiction in a statement before a Congressional subcommittee in 1988. "We are awash in plutonium," he admitted. "We have more plutonium than we need."

Just as increasing the number of arms has not made us safer, creating more nuclear weapons material only serves to further endanger public health and the environment. Greenpeace is working to put nuclear materials production on the nuclear disarmament agenda. A bilateral agreement to end plutonium and uranium production would force a limit on the continued production of nuclear weapons by the superpowers, stopping the arms race at its source.



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A group of activists from the Greenpeace ship Sirius (left) attempts to block a U.S. nuclear-armed aircraft carrier as it pulls into a Spanish port on June 9, 1988.

Nuclear Free Seas

It is increasingly likely that nuclear war, if it comes, will start at sea. The historical isolation of naval vessels operating far from home with little or no public scrutiny has, over the centuries, built up a tradition of independent action and excessive autonomy for the Navy. Even today, with improved electronic communications, the need for secrecy reinforces this tradition of autonomy. Although U.S. naval commanders are instructed to use nuclear weapons only upon receiving orders, there are so called "defensive" situations when a naval commander may use nuclear weapons at his discretion. The provocative positioning of superpower naval forces and the U.S. military's stated position that the use of nuclear weapons at sea is more thinkable than on land contributes to the likelihood that the sea will be the flashpoint for a nuclear war.

The naval forces of the nuclear powers—the U.S., U.S.S.R., China, France and the United Kingdom—move freely and quietly, out of view of the public. The Soviet and U.S. navies are regularly deployed near each other's war exercises and astride each other's sea lanes. They frequently engage in provocative maneuvers within a few miles of each other's coasts.

Former Secretary of the Navy John Lehman revealed that from 1982 to 1983, some 30 to 40 "potentially dangerous incidents" had occurred between U.S. and Soviet naval vessels. This statistic would not be so alarming if it were not for the fact that most of the ships and submarines of the superpower navies are nuclear-armed. Because the Soviet and U.S. navies operate in every ocean, a naval nuclear conflict would instantly become global in scope, leaving naval land-based facilities in every part of the world open to nuclear attack. While conventional navies were originally meant to be a nation's first means of defense, modern nuclear navies could draw the countries they protect into a nuclear war.

While New Zealand has declared itself a nuclear free zone and enforces that policy, other nations with nuclear prohibitions do not enforce their restrictions on naval nuclear weapons. Greenpeace is encouraging other nations to extend and enforce non-nuclear policies.

Over 16,000 nuclear weapons and more than 500 nuclear reactors are deployed at sea by the five nuclear navies. To date, there are no significant controls on naval nuclear armaments. Greenpeace believes these weapons must be open to negotiated reductions. The public should demand that navies be denuclearized and their strategies designed for confidence-building not provocation.

What Greenpeace Has Done

In 1983, in 1986 and 1987, the entry of Greenpeace campaigners onto the U.S. nuclear weapons testing site in Nevada brought international attention to the U.S. nuclear testing program and, in 1986, forced the postponement of tests. In 1985, the crew of the Rainbow Warrior relocated victims of nuclear testing on Rongelap in the Marshall Islands.

Two years later, Greenpeace activists protested the arrival of nuclear-armed warships in the United States, Canada, Australia and Spain. Greenpeace's long-term efforts to stop plutonium production at the Hanford facility in Washington state contributed to the DOE's decision to close the N-reactor in 1988. Greenpeace activities at other weapons plants have contributed to public disclosures of DOE negligence and the temporary closure of facilities at Savannah River Plant, Fernald and Rocky Flats, pending safety evaluations.

Greenpeace has provided leadership in a coalition to promote a "Plutonium Challange," pressing to completely end plutonium production for weapons. There are indications that the Plutonium Challenge could lead to a bilateral agreement between the U.S. and the U.S.S.R. to stop the production of all fissile materials.

What You Can Do

- Write letters to the President and to Congress urging them to a) stop nuclear testing, b) negotiate agreements to end the arms race at sea, c) fund cleanup of weapons facilities and their environs rather than the funding of new production plants.
- Write to the newspapers and magazines that you read and urge them to cover these issues.
- Contact Greenpeace for more information about these campaigns and how you can be more involved in this critical work.

GREENPEACE ACTION is a nonprofit organization. Contributions to GREENPEACE ACTION are not tax-deductible.

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▶ DO NOT BUY •

UPDATE: FEBRUARY 1991

The companies listed below either have themselves been nuclear weapons systems contractors or have been parent companies or subsidiaries of nuclear weapons systems contractors. Please do not buy their products.

AT&T	800-222-0300	Direct nuclear weapons systems contractor.
AMANA	800-843-0304	Subsidiary of Raytheon, a nuclear weapons systems contractor.
BLACK AND DECKER		Parent company of Advanced Technology, a nuclear weapons systems contractor.
CALORIC	800-637-6688	Subsidiary of Raytheon, a nuclear weapons systems contractor.
CHRYSLER		Direct nuclear weapons systems contractor.
FISK	800-243-3572	Subsidiary of Uniroyal, a nuclear weapons system contractor.
GENERAL ELECTRIC	800-626-2000	Direct nuclear weapons systems contractor.
GENERAL MOTORS		Direct nuclear weapons systems contractor.
GOODRICH TIRES		Direct nuclear weapons systems contractor.
GOODYEAR		Direct nuclear weapons systems contractor.
GTE	800-982-6347	Direct nuclear weapons systems contractor.
HEWLETT-PACKARD	800-752-0900	Direct nuclear weapons systems contractor.
HOMELITE		Subsidiary of Textron, a nuclear weapons system contractor.
HOTPOINT	800-626-2000 (GE number)	Subsidiary of General Electric, a nuclear weapons systems contractor.
IBM		Direct nuclear weapons systems contractor.
JEEP, EAGLE Automobiles		Subsidiary of Chrysler, a nuclear weapons systems contractor.
MICHELIN		Parent company of Uniroyal, a nuclear weapons systems contractor.
MCI	800-444-7373	Direct nuclear weapons systems contractor.
PHILIPS ELECTRONICS		Direct nuclear weapons systems contractor.
RCA	800-626-2000	Subsidiary of General Electric, a nuclear weapons systems contractor.
SCOTCH BRAND ADHESIVES, VIDEO AND AUDIO TAPE		Subsidiary of 3M Corporation, a nuclear weapons systems contractor.
SKIL POWER TOOLS		Subsidiary of Emerson Electric, a nuclear weapons systems contractor.
SPEEDQUEEN		Subsidiary of Raytheon, a nuclear weapons systems contractor.
SYLVANIA	800-982-6347	Subsidiary of GTE, a nuclear weapons system contractor.
UNIROYAL	800-243-3572	Direct nuclear weapons systems contractor.
WARING APPLIANCES		Subsidiary of Dynamics Corporation, a nuclear weapons systems contractor.

IF YOU WOULD LIKE TO RECEIVE THE NEXT UPDATE OF THIS LIST, please contact the Marin Nuclear Free Zone Coalition at the address below. The production and mailing of these lists costs money. Any amount that you can contribute to help in this effort will be greatly appreciated. Please make checks payable to: Marin Nuclear Free Zone Coalition at:

1000 Sir Francis Drake Boulevard, San Anselmo, CA 94960, 415–459–5676.

These purchasing suggestions are based upon Nuclear Free America's most recent list of nuclear weapons systems contractors (1989), cross-referenced with the 1990 edition of Corporate Affiliations. We present this information with the goal of promoting individual empowerment through education and seek to influence public policy with the ultimate aim of ending the worldwide production of nuclear weapons. The following statement is included on the advice of legal counsel: The Marin Nuclear Free Zone Coalition makes no representations, express or implied, that the information contained in this leaflet, based as it is upon information obtained from independent sources not affiliated with the Marin Nuclear Free Zone Coalition, is accurate. To confirm whether any contractor listed in this leaflet is, in fact, currently conducting nuclear weapons work, contact the contractor.

NUCLEAR FREE ZONE
MARIN COUNTY

DESCRIPTION OF THE DOE NUCLEAR WEAPONS COMPLEX

The facilities of the DOE complex are important links in the chain that is the nuclear arms race. While some plants serve more than one purpose, their main tasks are divided into A) research and development, B) nuclear weapons production, C) warhead component production and D) testing. The non-partisan General Accounting Office (GAO) has estimated that two-thirds of these plants need major overhauls. GAO also told Congress on February 8, 1989 that parts of the Savannah River Plant (SRP), along with the Hanford, Rocky Flats and Fernald plants, may have to become national sacrifice zones. This means the areas would be sealed off indefinitely because of contamination just as the Chernobyl site has been quarantined in the Soviet Union.

A. Research and Development

1. Lawrence Livermore National Laboratories
Livermore, California

Purpose: The plant designs nuclear weapons.
Known Problems: Livermore has released tritium into the air and plutonium-239 contaminates the soil.

2. Los Alamos National Laboratory
Los Alamos, New Mexico

Purpose: This plant also designs nuclear weapons.
Known Problems: The Los Alamos test area has been contaminated with many radioactive materials, including uranium. Some records of waste site locations have been lost.

3. Sandia National Laboratories
Albuquerque, New Mexico

Purpose: Sandia offers engineering support for the complex.
Known Problems: Uranium-238 has been released into the environment and underground storage tanks are leaking. There are elevated levels of tritium in local vegetation.

B. Nuclear Weapons Production

4. Hanford Reservation, Hanford, Washington

Purpose: The Hanford plant recycles uranium and extracts plutonium.
Known Problems: The Columbia River and area reservoirs used for both drinking and irrigation are contaminated with radioactive waste after almost forty years of careless waste disposal. In the 1940s and 1950s Iodine-131 was purposely released for eleven years to determine its effects on humans. At present the plant's reactor is completely shut down because of safety problems.

5. Oak Ridge National Laboratory
Oak Ridge, Tennessee

Purpose: Oak Ridge produces lithium and processes beryllium.
Known Problems: Oak Ridge has polluted nearby streams with mercury, boron and sulfate.

6. Savannah River Plant (SRP), Aiken, South Carolina.

Purpose: SRP produces plutonium and is the country's sole source of tritium.
Known Problems: Many serious accidents including a near meltdown have plagued the plant. Millions of curies (one curie equals 37 billion radioactive disintegrations per second) of tritium have been released into the air and elevated levels of chemical waste have been detected in the Tuscaloosa Aquifer. This aquifer is a major source of drinking water for the southeastern United States. After the National Academy of Sciences determined a Chernobyl-type accident was possible at SRP, DOE lowered the plant's production levels. Soon afterwards, further safety problems (including cracks in reactors) prompted the shutdown of all of SRP's reactors.

7. Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Purpose: The plant enriches uranium for fuel.
Known Problems: It has released uranium into the air and into the Ohio River.

8. Portsmouth Uranium Enrichment Complex
Piketon, Ohio

Purpose: This plant enriches uranium.
Known Problems: About 36 pounds of hexavalent (a cancer-causing agent) is released into the air every day.

9. Feed Materials Production Center, Fernald, Ohio

Purpose: The plant converts uranium into metal.
Known Problems: The Center's silos holding radioactive waste regularly release radon gas which is known to cause cancer. The conversion process has contaminated soil and water near the plant while leaking radioactive materials into the Great Miami Aquifer, which supplies water to the Cincinnati area.

10. Idaho National Engineering Laboratory (INEL)
Idaho Falls, Idaho

Purpose: The plant recycles uranium.
Known Problems: INEL has leaked toxic and radioactive wastes into the Snake River Aquifer.

C. Warhead Component Production

11. Mound Facility, Dayton, Ohio

Purpose: Tritium is recycled at the Mound Facility and detonators are produced.
Known Problems: Plutonium contaminated canals for five years and may presently be leaking into ground water.

12. Kansas City Plant, Kansas City, Missouri

Purpose: The Kansas City Plant assembles warheads.
Known Problems: Toxic chemicals have been released into the air. PCBs and other cancer-causing agents have contaminated the soil.

13. Rocky Flats Plant
Golden, Colorado

Purpose: Rocky Flats processes plutonium.
Known Problems: Cancer-causing organic materials are in the water near Denver. Plutonium has contaminated the soil and the plant has had over 200 fires. All of these factors led to its complete shutdown for safety overhauls. Colorado Governor Roy R. Romer has said he will close the plant indefinitely once its waste sites reach their capacity.

14. Pantex Facility
Amarillo, Texas

Purpose: The facility assembles warheads.
Known Problems: Toxic chemicals may be leaking into the Ogallala Aquifer.

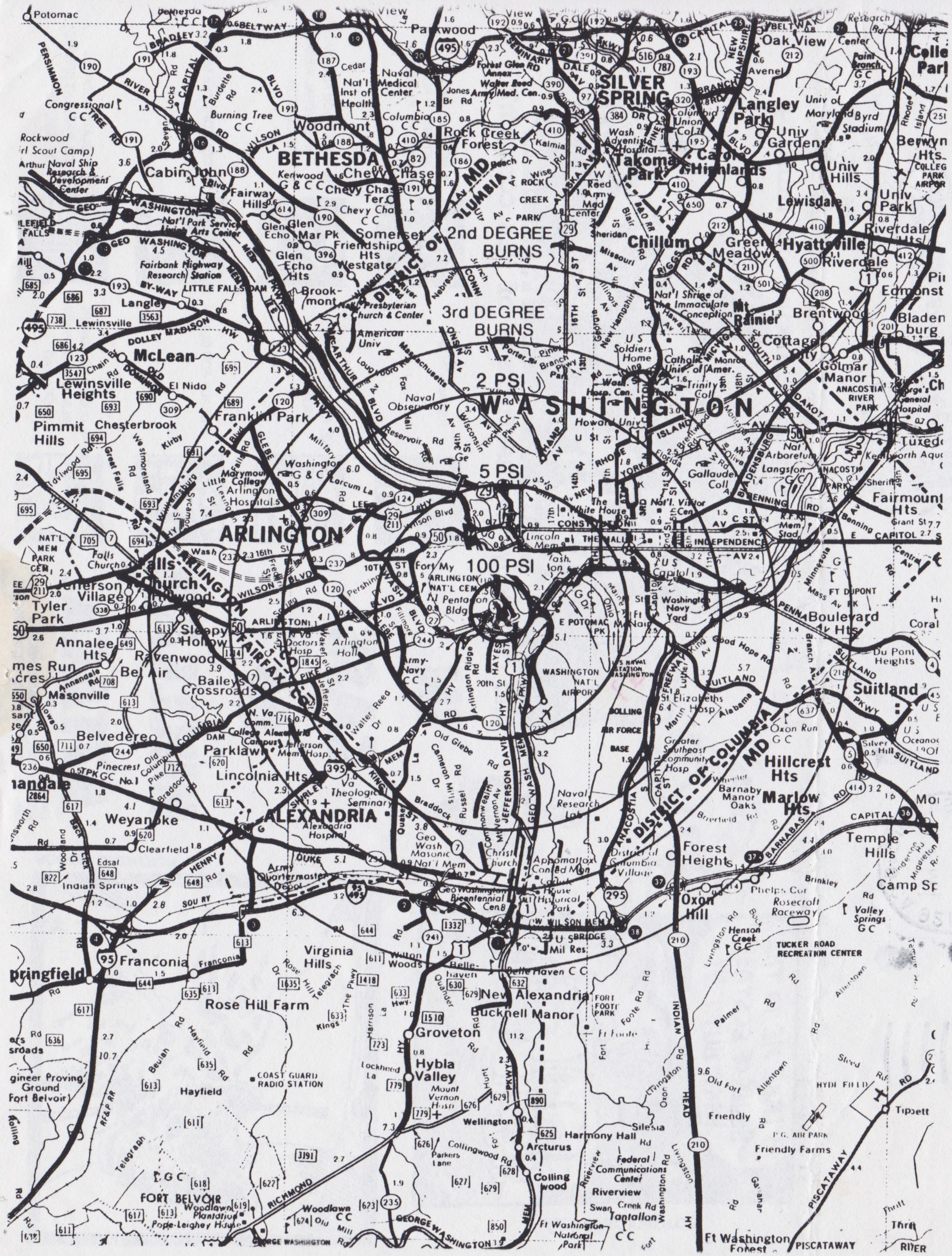
15. Pinellas Plant
Largo, Florida

Purpose: The plant makes neutron generators.
Known Problems: The underground storage tanks may be leaking chemicals.

D. Testing

16. Nevada Test Site
Las Vegas, Nevada

Purpose: Nuclear weapons are tested underground here.
Known Problems: The area is contaminated with plutonium and other radioactive materials from years of above-ground testing. The underground testing which followed is thought to have contaminated aquifers in the area.



IMMEDIATE DAMAGE FROM A SINGLE ONE MEGATON NUCLEAR WEAPON AIR BURST OVER THE PENTAGON BUILDING, WASHINGTON, D.C.

DAMAGE FROM BLAST

- INNER BLACK CIRCLE: 100 PSI: All buildings destroyed. No survivors.
- INTERMEDIATE BLACK CIRCLE: 5 PSI: All frame houses destroyed. Limited chances for survival
- OUTER BLACK CIRCLE: 2 PSI: Severe damage to all houses. Flying debris wounds many.

DAMAGE FROM HEAT

THE FIRESTORM COVERS EVERYTHING WITHIN THE OUTER RED CIRCLE, GENERATING WINDS UP TO 100 MILES PER HOUR.

- INNER RED CIRCLE: All people exposed to the initial flash suffer third degree burns. Survival chances minimal.
- OUTER RED CIRCLE: All people exposed suffer second degree burns requiring medical treatment. All wood, curtains, dry leaves etc. catch fire.

MANY OF THOSE WITHIN THE BLACK AND RED CIRCLES WHO ESCAPE THE BLAST AND HEAT EFFECTS ARE STILL EXPOSED TO LETHAL OR NEAR LETHAL LEVELS OF RADIATION FROM PROMPT GAMMA RAYS AND NEUTRONS.

X ON MAP INDICATES SITE OF EXPLOSION OF THE NUCLEAR BOMB AT 8000 FEET ALTITUDE.

WASHINGTON, D.C. AND VICINITY

Scale: 0 1 2 3 4 5 miles

For additional copies write to: Council For A Livable World Education Fund
11 Beacon Street Boston Massachusetts 02108

NUCLEAR POWER?

Bradley M. Gordon
P.O. Box 90775
San Diego, CA 92109

YOU ARE THE PROBLEM!

An Election Held Hostage?

- Was the 1980 Presidential election "held hostage?"
- Did the Reagan-Bush campaign enter into secret negotiations with the Iranian revolutionary leadership to delay the release of the hostages until after the Reagan-Carter election?

Startling new evidence has been uncovered to add credibility to these charges and Congress has authorized an investigation of the **October Surprise**. Find out more about this Constitutional crisis with the October Surprise video and the Information Resource and Campus Organizing Packet. Both will shed new light on the issue.

Send inquiries to: *Christic Institute; 1324 North Capitol Street, NW; Washington D.C.; 20002* (202) 797-8106 -

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1991

1991 USA CHRISTMAS

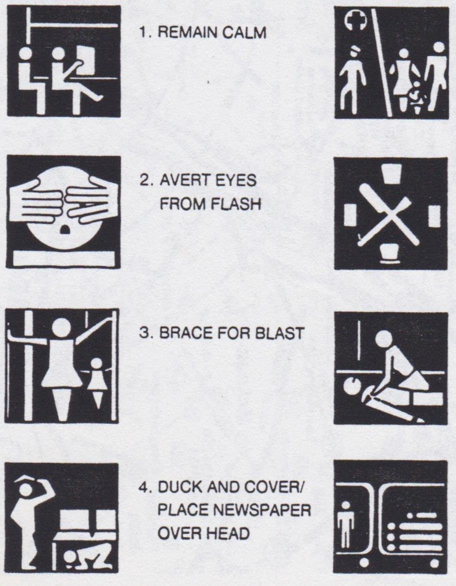
Anthony Below
1320 N.W. 76th Ave.
Plantation, FL.
33322-4740

"TAKE ME TO THE BRINK OF ECSTASY," ...MY BUTT!!!
Ace Backwords.

The Pope is thinking and thinking and thinking.

Who can deny the usefulness of His concern?

IN CASE OF NUCLEAR ATTACK:



1. REMAIN CALM
2. AVERT EYES FROM FLASH
3. BRACE FOR BLAST
4. DUCK AND COVER/ PLACE NEWSPAPER OVER HEAD
5. RESERVE MEDICAL ATTENTION FOR HIGH PRIORITY EVACUEES
6. HAVE FOOD AND WATER FOR SEVERAL WEEKS OF ISOLATION
7. COMFORT THE DYING
8. ISOLATE CORPSES TO PREVENT SPREAD OF DISEASE

DONNELLY/COLT, CUS
BOX 188, HAMPTO

NO THANKS